

Work Order ID 132072

Friday, April 24, 2015 10:34:32 AM

132072

Page 1

Item ID: D4044-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Center Rib Assembly
Start Date: 4/27/15 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 4/27/15 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: MCS Date: 15-04-24 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4044	A

100

0.00

100

Large Fab

Large Fab

Memo

0.00

- 1- Cut tube 60" and remove identification markings
- 2- Bend tube with manuel pipe bender as per template DT9579 (Make first line at 15.00")
- 3- Drill and chamfer holes in D4044-3 using DT8995 as per dwg D4044
- 4- Trim access tube material to finish size as per dwg D4044
- 5- weld bushing as per dwg D4044
A/R S.S. rod Batch: M130267
- 6- grind welds flush

2x

DL 15/4/28

2x

DAS
43
9-89

APR 29 2015

110

QC5- Inspect part completeness to step on W/O

0.00

110

QC

Quality Control

Memo

0.00

2x

DAS
24
9-89

APR 29 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																																												
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Work Order ID 132072

Friday, April 24, 2015 10:34:32 AM

132072

Page 2

Item ID: D4044-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Center Rib Assembly
Start Date: 4/27/15 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 4/27/15 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC10- Inspect visual per QSI004- ground welds	0.00							
120						DAS 24 9-89	2x		
QC	Memo	0.00							APR 29 2015
Quality Control									
130	Identify as per dwg & Stock Location: <u>www 01</u>	0.00							
130							2x	DAS 43 9-89	
Packaging	Memo	0.00							APR 29 2015
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							APR 29 2015
Quality Control									

MCS APR 29 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
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Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Picklist Print

Friday, April 24, 2015 10:34:31 AM

Page 1

Work Order ID: 132072

132072

Parent Item: D4044-043

D4044-043

Parent Item Name: Center Rib Assembly

Start Date: 4/27/15

Required Date: 4/27/15

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP RevA: new issue DD 10/01/05 verified by:EC IPP Rev:B as per dwg
revA DD 10.02.18 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3759-1		Manufactured	No			100	Each	141.0000	3	6	DAS 43 9-89	APR 29 2015	
D3759-1									**				
Bushing													

Location

Loc Qty

Loc Code

WA004

141

116816

69

117449

8

129746

22

130893

42

M304TS0.750W.049

Purchased

No

100

f

1,134.575

5

11

M304TS0 750W 049

304 SQ Tube .75x.75x.049W

Location

Loc Qty

Loc Code

WA004

1134.575

M130871

89.4

M131128

450.175

M131868

595

B129746 → 6x

DL 15/4/28

4

DQA: _____ Date: _____



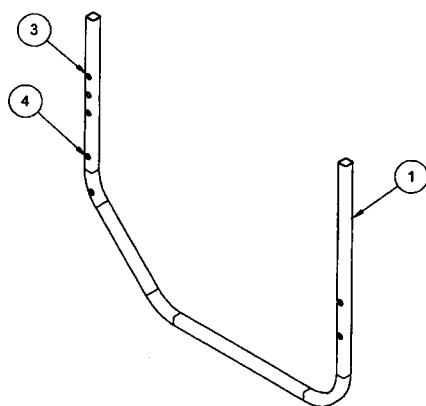
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

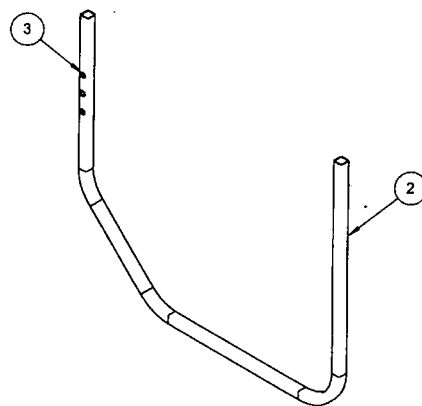
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				OTHER : ☐	

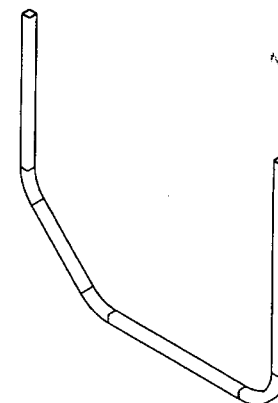
ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
	X		D4044-041	FWD RIB ASSY
		X	D4044-043	CENTER RIB ASSY
1	1		D4044-1	FWD RIB
2		1	D4044-3	CENTER RIB
3	3	3	D3759-1	BUSHING
4	4		D4021-9	BUSHING



D4044-041 FWD RIB ASSEMBLY



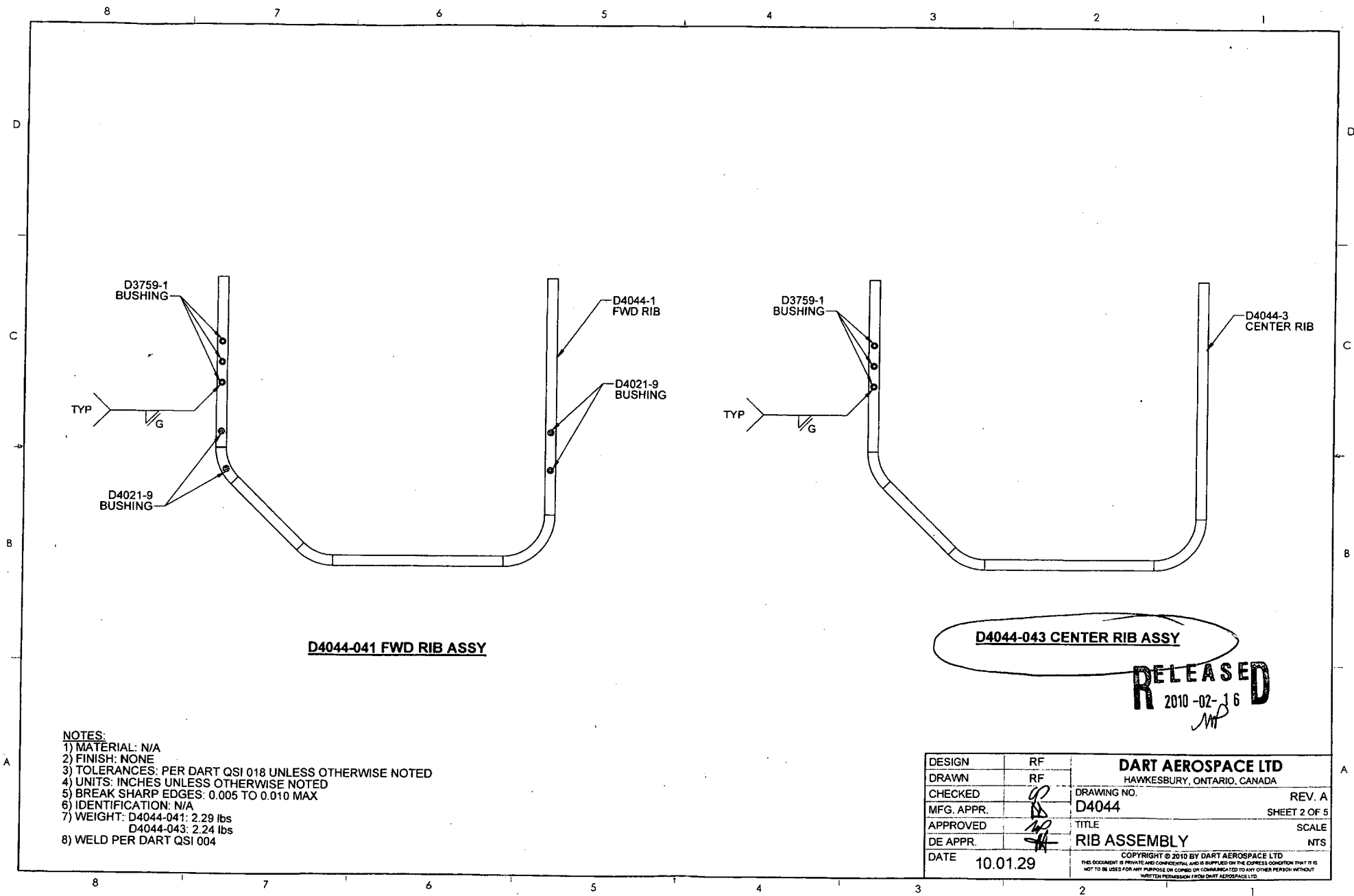
D4044-043 CENTER RIB ASSEMBLY

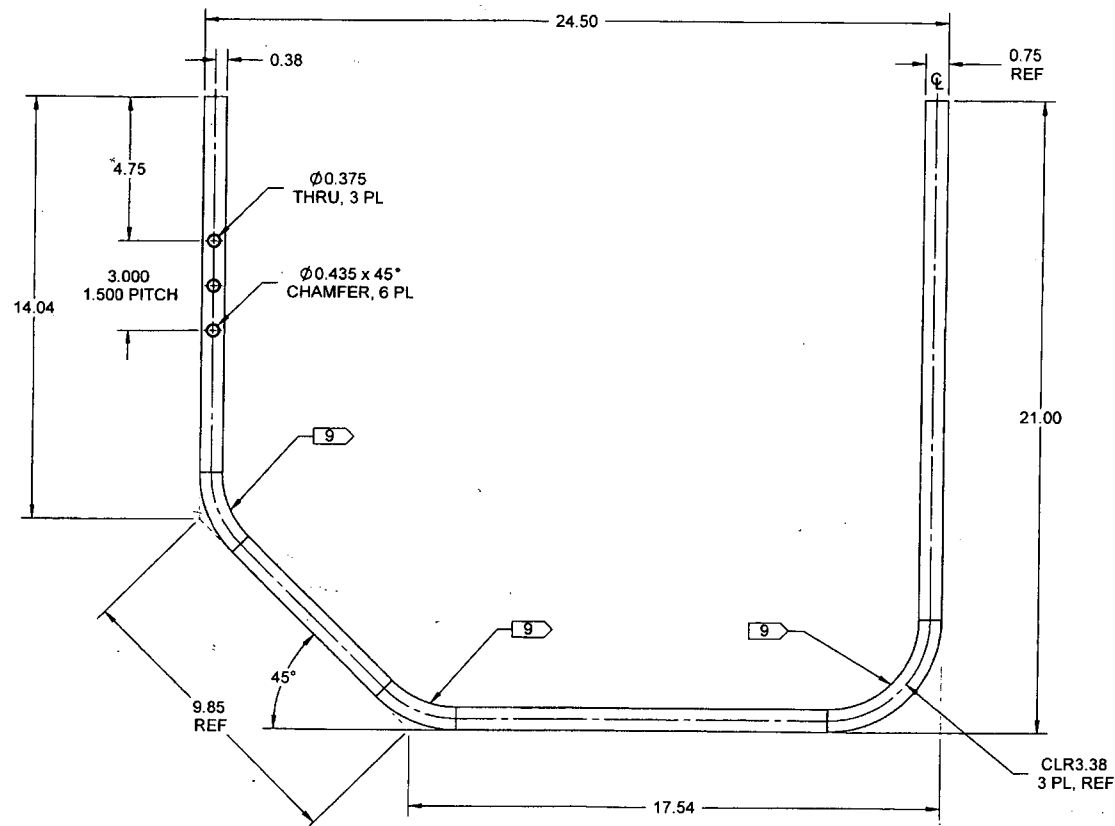


D4044-5 AFT RIB

RELEASED
2010-02-16
JW

A	NEW ISSUE	RF	10.01.29
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. A
CHECKED	[Signature]	D4044	SHEET 1 OF 5
MFG. APPR.	[Signature]	TITLE	SCALE
APPROVED	[Signature]	RIB ASSEMBLY	NTS
DE APPR.		COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	10.01.29		





D4044-3 CENTER RIB

RELEASED
2010-02-16

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBE, 0.750 x 0.75 x 0.049 WALL
REF DART SPEC. M304TS0.750W.049
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 2.20 lbs
- 8) TUBE FLAT LENGTH 59.31 REF
- 9) ALLOWABLE WRINKLING IN BENDS UP TO 0.15" DEEP MAX

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO. D4044	REV. A
MFG. APPR.	<i>[Signature]</i>	TITLE RIB ASSEMBLY	SHEET 4 OF 5
APPROVED	<i>[Signature]</i>	SCALE	NTS
DE APPR.	<i>[Signature]</i>	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
DATE	10:01:29	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	